



**MAR IVANIOS COLLEGE (AUTONOMOUS)**  
**THIRUVANANTHAPURAM**

Reg. No.:.....

Name:.....

**Fourth Semester B.Sc. Degree Examination, June 2016**

**First Degree Programme under CBCSS**

**Complementary Course: Botany – IV (for Zoology)**

**AUBO431.2e: Plant Physiology, Plant Ecology, Horticulture and Plant  
Biotechnology**

Time: 3 Hours

Max. Marks: 80

**SECTION – A**

*Answer ALL questions in one or two sentences.*

1. Define Imbibition.
2. Senescence.
3. Estuary.
4. Glycolysis.
5. Totipotency.
6. Arboriculture.
7. Antitranspirants.
8. Ecesis.
9. Emerson's enhancement Effect.
10. Embryoids.

**(10 × 1 = 10 Marks)**

**SECTION – B**

*Answer any EIGHT questions, each in a short paragraph not exceeding 50 words.*

11. What is CAM ?
12. What are ecological pyramids ? Mention any two kind of ecological pyramid.
13. Differentiate absorption spectrum from action spectrum.

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14. Define vivipary. Mention its significance.
  15. Explain food chain and food web.
  16. What is transpiration pull theory ?
  17. What are the advantages of vermicompost ?
  18. Differentiate dedifferentiation and redifferentiation.
  19. What is DPD ?
  20. Mention four tillage tools used in gardening.
  21. Write note on organic and inorganic manures.
  22. What is meristem culture ? What is the advantage of meristem culture ?
- (8 × 2 = 16 Marks)**

**SECTION – C**

*Short essay type : Answer any SIX questions.*

23. Discuss the mechanism of water absorption in plants.
  24. Give an account of the physiological effect of auxins.
  25. Mention anatomical and physiological adaptations of hydrophytes.
  26. Describe different types of transpiration in plants.
  27. Write down the differences between cyclic and noncyclic photophosphorylation.
  28. Differentiate between C<sub>3</sub> Cycle and C<sub>4</sub> Cycle.
  29. Explain cell suspension culture.
  30. What is seed dormancy ? What are the advantages of seed dormancy ?
  31. What is succession ? Add a note on xerose.
- (6 × 4 = 24 Marks)**

**SECTION – D**

*Long essay type : Answer any Two questions.*

32. Explain Krebs cycle. Draw a schematic diagram; Mention the enzymes in all steps.
  33. What are xerophytes ? Discuss the various morphological, anatomical and physiological adaptations of xerophytes.
  34. Explain briefly different methods of vegetative propagation in plants.
  35. Explain the procedure of plant tissue culture.
- (2 × 15 = 30 Marks)**

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